

## A STUDY OF RELATIONSHIP OF PARENTS' MOTIVATION ON DYSLEXIC CHILDREN'S SCHOOL GOING BEHAVIOUR

Juhri Abdul Muin<sup>1\*</sup>, Riyanto<sup>2</sup>, Satryo Budi Wibowo<sup>3</sup>

<sup>1,2,3</sup>Universitas Muhammadiyah Metro, Lampung, Indonesia.

Email: <sup>1\*</sup>[juhriabdulmuin@gmail.com](mailto:juhriabdulmuin@gmail.com), <sup>2</sup>[riyanto@gmail.com](mailto:riyanto@gmail.com), <sup>3</sup>[satrio-budi@mail.ugm.ac.id](mailto:satrio-budi@mail.ugm.ac.id)

Article History: Received on 11<sup>th</sup> December 2020, Revised on 25<sup>th</sup> March 2020, Published on 14<sup>th</sup> March 2020

### Abstract

**Purpose of the study:** This study aims to identify the type of dyslexia students have and the relationship with motivation given by parents for dyslexic students to go to school.

**Methodology:** This type of research is associative quantitative research with correlational design. Where the total number of the sample from this study were 48 students and parents' with details of 35 male students and 13 female students who were taken based on purposive sampling techniques and 48 students' parents, data were then analyzed with the help of SPSS 21 application to look for descriptive statistics in the form of mean, min, and max as well as the relationship between parents' motivation and dyslexic children.

**Main Findings:** From the results of the analysis that has been done, there is a relationship between parents' motivation in fostering the interests of dyslexic children, this is reinforced by the results of dyslexia indicators of PA type with good categories of 64.6% (31 of 48) students, RAN indicators with good categories of 58.3 % (28 out of 48) students, WM indicators with good categories were 62.5% (30 out of 48) students, and parents' motivation for dyslexic children had a useful category of 60.4% (30 out of 48) students.

**Applications of this study:** For this reason, it is recommended that parents of children with dyslexia children give more attention or motivation than normal healthy children.

**Novelty/Originality of this study:** In this study, the renewal is looking at the types of dyslexia students, both those of type Phonological Awareness, Rapid Automatized Naming, Working Memory, as well as the relationship with the motivation of parents in motivating children with dyslexia.

**Keywords:** *Motivation, Phonological Awareness, Rapid Automatized Naming, Working Memory.*

### INTRODUCTION

Children with special needs (ABK) are broadly defined as children who are significantly different from healthy children their age so that they require special education services ([UNESCO, 2001](#); [DITPLB, 2012](#)). The difference in ABK compared to healthy children is because they have disabilities, have meager learning achievement, and are unable to speak well (Wade, 2000). Disabilities in children with special needs can be in the form of children with learning difficulties, such as learning disabilities ([Hallahand & Kauffman, 1988](#)). Salamanca Declaration in 1994 made aware that ABK has the right to choose to go to public schools (United Nations Educational Scientific and Cultural Organization). In Indonesia, through Law Number 20 of 2003 concerning the national education system, ABK has the right to choose to go to public schools known as the system inclusive education: All children have the right to education in their communities, can learn, need support for learning and teaching that is focused on children and beneficial for all children ([Stubss, 2002](#)).

The development of written language skills develops more slowly. To reach the stage of reading fluently, there are several stages that children need to go through in a short amount of time ([Asrial et al., 2019](#)). Most children only reach the stage of reading fluently around the age of 6-8 years. Although some methods can teach the ability to read faster, still, the ability to read can only be taught when the child can speak. Therefore, teaching reading skills to children is far more complicated than merely teaching speaking skills ([Mann & Wimmer, 2002](#); [Kjeldsen et al., 2019](#)). The ability to speak can be taught naturally in the family environment without having to put the child into formal school. In contrast to teaching the ability to speak, when teaching reading skills, children must learn informal institutions or use specific methods to be able to read ([Melby, Lyster & Hulme, 2012](#)).

Sometimes children will experience difficulties in learning to read and eventually become unable to read. Professionals and experts mostly define learning difficulties as the difference between the achievements in schools obtained, with the assumption of the potential possessed by children, where school performance is usually lower ([Stanovich, 1991](#); [Astalini et al., 2019](#); [Astalini et al., 2019](#)). This assumption is based on the child's inability to use its full potential so that it fails in learning. Likewise, with reading difficulties, the definition of the difference between potential abilities and performance in learning to read has also been widely used, especially by educators ([Pfof, 2015](#); [Suggate, 2016](#)). The difficulty of children in reading is what is called dyslexia.

One way to overcome learning difficulties in dyslexic children is to increase learning motivation in children. A dyslexic child has average intelligence, motivation, and sufficient educational opportunities. Most people have dyslexia childhood, but when they grow up have intelligence in their thinking. Also, children who have dyslexia are not children

with less intelligence, so parents must treat it the same as healthy children. Parents can motivate children so that children feel confident that they are capable of. In essence, ([Astalini et al., 2019](#); [Maison et al., 2019](#)) motivation is divided into two types, namely intrinsic motivation and extrinsic motivation: (1) intrinsic motivation, this type of motivation arises from within the individual himself without coercion or encouragement from others; and (2) extrinsic motivation, this type of motivation arises as a result of influences from outside the individual, whether because of invitations, orders or encouragement from others so that with such circumstances students want to do something or learn. Teaching children to read is easy when taught in a happy, relaxed, carefree atmosphere or fearful of failure ([Ziegler et al., 2010](#); [Torppa et al., 2010](#)). If the parents set an example and direct the child or accustom the child to reading, then the child will be more interested and motivated to do something if accompanied by an example, not just a theory or telling. Thus parents and teachers alike have a significant role in shaping and improving children's reading habits ([Snowling & Hulme, 2011](#); [Shaywitz et al., 2002](#)).

Therefore, the researcher aims to identify students who have dyslexia and the relationship with parents' motivation to invite their children to go to school.

## LITERATUR REVIEW

Dyslexia is a developmental reading disorder caused by cognitive processing dysfunction in the brain ([Landerl et al., 2013](#)). The main symptoms of dyslexia in the form of reading difficulties usually appear when students enter primary school early. In primary schools in Indonesia, children begin to be taught to learn to read at the level of early childhood education (ECE). So when students enter the elementary school level, students are required to have already the ability to read. However, in reality, many students at the beginning of elementary school cannot read. Primary school students who are unable to read are indicated to have failed to learn to read at a previous educational level. [Ziegler & Goswami \(2005\)](#); [Pfost et al. \(2019\)](#) also show that, initially, to become a skilled reader, children need to gain knowledge about the alphabet system, which this process can cause difficulties for children who learn to read. The brain must be taught to be able to process written language because they can prepare a spoken language. So that reading and writing skills develop properly, [Dickinson et al. \(2010\)](#); [Ehri et al. \(2001\)](#) argue that written language processing must be able to gain a foothold in the brain, such as the mechanism used by the brain to process spoken language. Thus, disability in certain parts of the brain associated with language processing will interfere with the development of reading skills in children. Thus, reading motivation and attitudes toward reading are central factors affecting reading performance ([Sideridis et al., 2006](#); [Schiefele et al., 2012](#)). A common characteristic of children with dyslexia is difficulty in processing phonology (voice manipulation), spelling, and speed of visual-auditory response. So that teachers in primary schools have difficulty in teaching children with dyslexia, causing low dyslexic children's learning outcomes for all subjects, their tendency to group out of school. ([Irdamurni et al., 2018](#)). Therefore, help is needed from parents of students in motivating students to go to school.

Motivation stems from the word "motif". The motive is defined as the driving force within a person to carry out certain activities for the achievement of a goal ([Ziegler et al., 2010](#)). Motivation is a change in energy in a person that is marked by the emergence of feelings and is preceded by a response to the existence of goals ([Astalini et al., 2019](#); [Maison et al., 2019](#)). In this opinion, there are three elements in motivation, namely: 1) motivation initiates changes in energy, 2) is characterized by feelings, and 3) is stimulated because of goals. Here's how to overcome learning difficulties in dyslexic children: (1) increase learning motivation in children; (2) using learning media; (3) increase children's confidence; (4) never blame the child for his condition; and (5) always assisting children in learning.

## METHODOLOGY

Quantitative research methods with correlational research designs. Associative quantitative research is the relationship between two or more variables ([Kerlinger, 2014](#)). Because research is associative research, researchers take correlational research designs. According to ([Creswell, 2012](#)), "Correlation Design in quantitative research is used to measure the level of association (relationship) between two variables using statistical analysis of correlation procedures".

The research sample was obtained from 48 students, and parents of students in the Elementary School in the Metro district used a total sampling technique, with 13 female students and 35 male students. With details of SDN 1 Metro Pusat, SDN 1 Metro Timur, SDN 2 Metro Timur, SDN 2 Metro Barat, SDN 2 Metro Pusat. The technique of taking total sampling involves or takes all samples in the population ([Cramer, 2003](#)).

In this study, the study used (1) tests, tests are used to find out the types of dyslexia possessed by dyslexic students; (2) questionnaires, questionnaires are used to see student motivation, (3) interviews, interviews used are structured interviews that are intended to dig deeper about the problem, in this case, is the motivation of students in going to school, which is done to students and parents. Where, the test is intended for students to see the types that are owned by the child, while the questionnaire is used to retrieve data from parents to see parents' attention for dyslexic children. The questionnaire has 26 valid statements with a reliability value of 0.73 using a Likert four scale and using structured interviews aimed at strengthening quantitative data. The data is used by the SPSS program to look for descriptive. Data used by the SPSS program to look for descriptive and inferential statistics. For example, mean, median, minimum, maximum, and standard deviation ([Cohen, Manion, & Morrison, 2007](#)). Statistical conclusions from mathematical procedures for using probabilities and information about samples to conclude populations from which samples might be

drawn (Kerlinger, 2014). In this study, the descriptive statistics used are the mean, minimum value, maximum value, category, and percentage, as well as for inferential statistics using product-moment correlation.

The categories of dyslexia students and motivation, very good, good, not good, and very not good, like table 1 in below:

**Table 1:** Categories of dyslexia and motivation

Category	Interval			
	Dyslexia			Motivation
	PA	RAN	WM	Motivation
Very Not Good	6.0 – 10.5	7.0 -12.3	6.0 – 10.5	26.0 – 45.5
Not Good	10.6 – 15.0	12.4 – 17.5	10.6 – 15.0	45.6 – 65.0
Good	15.0 – 19.5	17.6 – 22.7	15.0 – 19.5	65.1 – 84.5
Very Good	19.6 – 24.0	22.8 – 28.0	19.6 – 24.0	84.6 – 104.0

In data collection, the first activity that must be done is to select students based on the categories provided by researchers, then provide tests to students. Motivational questionnaires for parents, then the data is processed using SPSS 21 application assistance to see descriptive statistics, in the form of mean, min, max, percentage and category of students and to see whether there is a relationship between these variables.

## RESULTS/FINDINGS

### Phonological Awareness

The results of the test for dyslexic students are given and have been obtained and processed the results using the SPSS 21 application, which we can see in the table below:

**Table 2:** Results of the indicators of dyslexia students PA type

Classification					Mean	Min	Max	%
Range	M	F	Responses	Total				
6.0 -10.5	0	0	Not very good	0	17.1	12.0	23.0	0.0
10.6 – 15.0	4	3	Not good	7				14.6
15.1 – 19.5	25	6	Good	31				64.6
19.6 – 24.0	6	4	Very good	10				20.8
TOTAL	35	13		48				100

From table 2, which came from 48 respondents from high school students in the good category, and after being processed and obtained the results using the SPSS 21 application program, it was found that the dyslexic indicator of PA type had a suitable category of 64.6% for 31 students from 48 total students, not good at 14.6% for a total of 7 students out of 48 total students, and excellent 20.8% for 10 students out of 48 total students. Of the 48 students having a Mean value of 17.1, Maximum Value of 23.0, and Minimum Value of 12.0.

### Rapid Automatized Naming

The results of the test for dyslexic students are given and have been obtained and processed the results using the SPSS 21 application, which we can see in the table below:

**Table 3:** Results of the indicator of dyslexic students RAN type

Classification					Mean	Min	Max	%
Range	M	F	Responses	Total				
7.0 – 12.3	0	0	Not very good	0	18.5	15.0	22.0	0.0
12.4 – 17.5	4	2	Not good	6				12.5
17.6 – 22.7	21	7	Good	28				58.3
22.8 – 28.0	10	4	Very good	14				29.2
TOTAL	35	13		48				100

From table 3, which came from 48 respondents from high school students in the good category, and after being processed and obtained the results using the SPSS 21 application program, it was found that the dyslexic indicator type RAN had a suitable category of 58.3% for 28 students from 48 total students, not good at 12.5% for a total of 6 students out of 48 total students, and excellent 19.2% for 14 students out of 48 total students. Of the 48 students having a Mean value of 18.5, Maximum Value of 22.0, and Minimum Value of 15.0.

### Working Memory

The results of the test for dyslexic students are given and have been obtained and processed the results using the SPSS 21 application, which we can see in the table below:

**Table 4:** Results of the indicators of dyslexia students WM type

Classification					Mean	Min	Max	%
Range	M	F	Responses	Total				
26.0 – 45.5	0	0	Not very good	0	75.5	46.0	103.0	0.0
45.6 – 65.0	6	2	Not good	8				16.7
65.1 – 84.5	23	7	Good	30				62.5
84.6 – 104.0	6	4	Very good	10				20.8
TOTAL	35	13		48				100

From table 4, which came from 48 respondents from high school students in the good category, and after being processed and obtained the results using the SPSS 21 application program, it was found that the dyslexic indicator WM type had a suitable category of 62.5% for 30 students from 48 total students, not good at 16.7% for a total of 8 students out of 48 total students, and excellent 20.8% for 10 students out of 48 total students. Of the 48 students having a Mean value of 75.5, Maximum Value of 103.0, and Minimum Value of 46.0.

### Motivation

The results of the test for dyslexic students are given and have been obtained and processed the results using the SPSS 21 application, which we can see in the table below:

**Table 5:** Results of the motivation of parents in sending children to school dyslexia

Classification					Mean	Min	Max	%
Range	M	F	Responses	Total				
26.0 – 45.5	0	0	Not very good	0	77.5	47.0	102.0	0.0
45.6 – 65.0	5	3	Not good	8				16.7
65.1 – 84.5	10	19	Good	29				60.4
84.6 – 104.0	3	8	Very good	11				22.9
TOTAL	18	30		48				100

From table 5, which came from 48 respondents from high school students in the good category, and after being processed and obtained the results using the SPSS 21 application program, it was found that the motivation of parents in dyslexic children had a suitable category of 60.4 % for 29 students from 48 total students, not good at 16.7% for a total of 8 students out of 48 total students, and excellent 22.9% for 11 students out of 48 total students. Of the 48 students having a Mean value of 77.5, Maximum Value of 102.0, and Minimum Value of 47.0.

### Motivational relationship between parents and dyslexic children

The results of the relationship between parental motivation for dyslexic children can be seen in the table below.

**Table 6:** Relationship of dyslexic children with parents' motivation for school

		Dyslexia	Motivation
Dyslexia	Pearson Correlation	1	.638**
	Sig. (2-tailed)		.028
	N	48	48
Motivation	Pearson Correlation	.638**	1
	Sig. (2-tailed)	.028	
	N	48	48

\*Correlation is significant at the 0.05 level (2-tailed)

From table 6 we can see that the sig value is 0.028 less than 0.05, it can be concluded that there is a relationship between the motivation of parents in sending their children affected by dyslexia with r values of 0.638 and positive. If the sig value <0.05, then there is a relationship (Gall, 2003).

## DISCUSSION/ANALYSIS

### 1. Phonological Awareness

The results of the test analysis of the dyslexia type PA in table 2 have a good ability of 64.6% (31 of 48) students. This type is shown by students who have PA dyslexia shown and said by these students who are accompanied by their parents that, such students cannot mention colors quickly, in the assignment of naming numbers more slowly

The ability of phonological awareness is the awareness that spoken language can be divided into single words, and single words can also be sorted into phonemes/letter sounds (Castles & Coltheart, 2004; Anthony & Francis, 2005). According to (Torgesen et al., 1994; Ehri et al., 2001) Phonological awareness, the ability to distinguish, identify, and manipulate the sounds of speech, is an important predictor of reading development. This aspect of phonological awareness is



especially important in the process of decoding languages with complex spelling systems such as English. This is because English has a very inconsistent spelling system. For example, the sound of the letter <u> on the word hurt and but will have a different sound. Conversely, in Indonesian studies, it is known that the sound of the language possessed is not too complicated compared to English and is commonly referred to as a language system that adopts shallow orthography (Chaer, 2009; Kovelman et al., 2012; Dandache, Wouters & Ghesquiere, 2014). Consistency between letters and letter sounds is still higher than in English. Therefore, the emphasis on learning to read early in Indonesia, usually directly focuses on syllables and the addition of prefixes, middle, and suffixes, not on the sound of letters (phonemes). Children become less aware of phonemes than syllables or words. Though awareness of the sound of these letters is also important in learning to read. Based on several studies with a variety of subjects, ranging from normal children to children who have difficulty reading, difficulty focusing, speech delay, and several other learning difficulties, it is mentioned that among these aspects of phonological processing abilities, phonological awareness is the most influential factor in decoding and spelling (Skibbe, Behnke & Justice, 2004; Wolf, Schroeders & Kriegbaum, 2016; Debska et al., 2016).

## 2. Rapid Automatized Naming

The results of the test analysis of the dyslexia type RAN in table 3, have a good ability of 58.3% (28 of 48) students. This type is shown by students who have dyslexia type RAN shown and said by these students who are accompanied by their parents that, such students can not mention the various colors quickly, in the assignment of naming numbers more slowly

Based on the results of descriptive analysis obtained consistent results, students who have read faster in completing the naming task than students who have not read. The analysis also shows that students complete the assignment of naming numbers faster than the naming of colors and naming objects. This result is consistently found in students who can read or have not read (Cronin, & Carver, 1998). Findings in the descriptive analysis will be followed by inferential analysis to ascertain whether the difference is significant or not. Descriptive analysis results show that elementary school students who have not been able to read, have the lower ability in the assignment of Rapid Automatized Naming (RAN), compared to elementary school students who can read. The analysis shows that elementary school students who have not been able to read consistently have lower abilities on all RAN assignments. Additionally, studies have revealed some early cognitive markers of dyslexia related to literacy development, among which the most commonly reported are phonological awareness and rapid automatized naming (Lyytinen et al., 2004; Lyytinen et al., 2005). In the curriculum in Indonesia, reading lessons have been taught at the level of early childhood education (ECE). Thus, elementary school students who are found unable to read are students who fail in the process of learning to read at the previous educational level (Lyytinen et al., 2006). Consistent results that children who cannot read in elementary school always lose all RAN assignments, which shows that students are suspected of tending dyslexia.

## 3. Working Memory

The results of the test analysis of the dyslexia type WM in table 4, have a good ability of 62.5% (30 of 48) students. According to research by Fostick & Revah (2018), the process of reading words and spelling letters requires a model that explains how information flows through various aspects of our declarative memory system, which refers to a two-store (memory) storage model. Subjects Some people appear to have a rare ability to receive and master a large amount of visual information. However, most likely, someone can remember the location of the four or five letters. poor working memory, which causes difficulties in retaining and manipulating information (Banai & Ahissar, 2004; Garcia et al., 2014; Nelson, Lindstrom & Foels, 2015; Zhao et al., 2015). Clear limits on perception and early memory are known as span of apprehension or understanding. According to Verhagen & Leseman (2016); Schwarb, Nail, & Schumacher (2016), children who experience brain disorders can do several tests. From the test results, it can be seen which brain regions are affected, so a diagnosis can be made whether the child is classified as learning disabilities or not.

## 4. Motivation

The results of the test analysis of the motivation of parents in table 5 have a good ability of 60.4% (29 of 48) students. Parental attention is a form of emotional attachment given by parents to children. Emotional ties in the form of love and sincere love for children. Forms of affection can be done through words/words and attitudes/actions such as paying attention to children's health, supervising children's learning activities, creating a comfortable learning atmosphere, meeting children's learning needs, providing tutoring, and giving rewards and punishment to children.

According to Astalini et al., 2019; Maison et al., 2019; Asrial et al., (2019) is how parents can exploit the potential of intrinsic motivation, assuming that intrinsic motivation is in the minds and hearts of students. There are several strategies that parents can use to foster student motivation. Give gifts When students can complete the tasks given by parents correctly and appropriately, parents should give memorable and simple gifts such as encouragement, praise, and applause (Ryan & Deci, 2009; Mihandoost, 2012). Give praise can be shown both verbally and non-verbally. In the non-verbal form, for example, a nod of the head, a smile, or a shoulder clap, parents should encourage children to continue learning, and give maximum attention to foster a child's enthusiasm for learning, so they want to go to school. By listening to difficulties from children, parents become child assistants in facing open learning difficulties to increase students' pleasure in receiving lessons (Conradi, Jang & McKenna, 2013). One instance is the parents of students giving

motivation to their children to give spirit or enthusiasm by giving gifts if they want to go to school or will be invited to go on vacation when the holiday season arrives, then give praise when accompanying the student to study at home, so he is always eager to learn especially going to school.

From the results of the study in table 6 on the relationship of parents' motivation to motivate children affected by dyslexia to go to school, it means that there is motivation from parents to send their children affected by dyslexia, then the child will be more eager to go to school because it is directly influenced by factors external often encountered, namely the parents of children who have dyslexia. With motivation from parents in accompanying dyslexic children will foster the spirit of the child.

## CONCLUSION

From the results of the analysis that has been done, there is a relationship between parents' motivation in fostering the interests of dyslexic children, this is reinforced by the results of dyslexia indicators of PA type with good categories of 64.6% (31 of 48) students, RAN indicators with good categories of 58.3% (28 of 48) students, WM indicators with good category were 62.5% (30 out of 48) students, and parents' motivation for dyslexic children had a suitable category of 60.4% (30 out of 48) students. For this reason, it is recommended that parents of children with dyslexia children give more attention or motivation than normal healthy children.

## LIMITATION AND STUDY FORWARD

This study only discusses the type of dyslexic students of type PA, RAN, and WM.

## ACKNOWLEDGMENT

Thank you, researchers, say to the principal who has permitted me in conducting research, as well as all students and parents of students who have been respondents in this study, I thank you.

## AUTHORS CONTRIBUTION

**Juhri Abdul Muin** is a professor at the Metro Muhammadiyah University and the Chairperson of the Abk and Non-Abk teacher supervision research group for each level of education, be it elementary, junior high and senior high. the role of this research is as the coordinator of making articles, instruments, taking data, and managing data.

**Riyanto** is a lecturer at the University of Muhammadiyah Metro and a member of the teacher supervision research group for non-abk teachers for each level of education, be it elementary, junior high school and senior high school, the role in this research is to create instruments and input data.

**Satriyo Budi Wibowo** is a lecturer at the University of Muhammadiyah Metro, and a member of the teacher supervision group research for non-abk and non-abk teachers for each level of education, be it elementary, junior high and senior high, the role of this research is as data manager and analyzing data.

## REFERENCES

1. Anthony, J. L., & Francis, D. J. (2005). Development of phonological awareness. *Current Directions in Psychological Science*, 14, 255–259. <https://doi.org/10.1111/j.0963-7214.2005.00376.x>
2. Asrial., Syahrial., Kurniawan, D. A., Subandiyo, M., Amalina, N. (2019). Exploring obstacles in language learning among prospective primary school teachers. *International Journal of Evaluation and Research in Education (IJERE)*, 8(2), 249-254.
3. Asrial, Syahrial, Kurniawan, D. A., Chan, F., Nugroho, P., Pratama, R. A., Septiasari, R. (2019). Identification: The Effect of Mathematical Competence On Pedagogic Competency Of Prospective Teacher. *Humanities & Social Science Reviews (HSSR)*.7(4), 85-92. <https://doi.org/10.18510/hssr.2019.7413>
4. Astalini, Kurniawan, D. A., Darmaji, Sholihah, L. R., Perdana, R. (2019). Characteristics Of Students' Attitude To Physics In Muaro Jambi High School. *Humanities & Social Science Reviews (HSSR)*,7(2), 91-99. <https://doi.org/10.18510/hssr.2019.7210>
5. Astalini, A., Darmaji, D., Kurniawan, D. A., Melsayanti, R. (2019). E-Assessment of Student Perception of Natural Science-Based on Seska in Middle School Students in Indonesia. *International Journal of Scientific & Technology Research*, 8(9), 858-863.
6. Astalini., Kurniawan, D. A., Sulistiyo, U., Perdana, R., Susbiyanto, S. (2019). E-Assessment Motivation in Physics Subjects for Senior High School. *International Journal of Online and Biomedical Engineering (iJOE)*,15(9), 4-15. <https://doi.org/10.3991/ijoe.v15i11.10843>
7. Banai, K., & Ahissar, M. (2004). Poor frequency discrimination probes dyslexics with particularly impaired working memory. *Audiology and Neuro-Otology*, 9(6), 328–340. <https://doi.org/10.1159/000081282>
8. Castles, A., & Coltheart, M. (2004). Is there a causal link from phonological awareness to success in learning to read? *Cognition*, 91, 77–111. [https://doi.org/10.1016/S0010-0277\(03\)00164-1](https://doi.org/10.1016/S0010-0277(03)00164-1)
9. Chaer, A. (2009). *Phonology Bahasa Indonesia*. Jakarta: Rineka Cipta.
10. Conradi, K., Jang, B. G., & McKenna, M. C. (2013). *Motivation terminology in reading the research: A conceptual Review*. Educational Psychology Review. <https://doi.org/10.1007/s10648-013-9245-z>

11. Cronin, V., & Carver, P. (1998). Phonological sensitivity, rapid naming, and beginning reading. *Appl. Psychol.* 19, 447–461. <https://doi.org/10.1017/S0142716400010262>
12. Dandache, S., Wouters, J., Ghesquière, P. (2014). Development of reading and phonological skills of children at family risk for dyslexia: a longitudinal analysis from kindergarten to sixth grade. *Dyslexia*. 20, 305–329. <https://doi.org/10.1002/dys.1482>
13. Cohen, L., Manion, L., & Morrison, K. (2007). *Research Methods In Education*: Routledge.
14. Cramer, D. (2003). *Advanced quantitative data analysis*. McGraw-Hill Education (UK).
15. Cresswel, J. W. (2012). *Educational Research: Planning, Conducting, And Evaluating Quantitative And Qualitative Research*. New York: Pearson.
16. Debska, A., Luniewska, M., Chyl, K., Banaszkiewicz, A., Zelechowska, A., Wypyxh, M., Marchewka, A., Pugh, K., R., Jednorog, K. (2016). *NeuroImage*. 132, 406–416. <https://doi.org/10.1016/j.neuroimage.2016.02.063>
17. Dickinson, D. K., Golinkoff, R. M., & Hirsh-Pasek, K. (2010). Speaking out for language: Why language is central to reading development. *Educational Researcher*, 39, 305–310. <https://doi.org/10.3102/0013189X10370204>
18. Ehri, L. C., Nunes, S. R., Willows, D. M., Schuster, B. V., Yaghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis. *Reading Research Quarterly*, 36, 250–287. <https://doi.org/10.1598/RRQ.36.3.2>
19. Direktorat Jendral Pendidikan Luar Biasa (DITPLB). 2012. *Mengenal Pendidikan Inklusif*. Diunduh dari: <http://www.ditplb.or.id>
20. Fostick, L., & Revah, H. (2018). Dyslexia as a multi-deficit disorder: Working memory and auditory temporal processing. *Acta Psychologica*. 183, 19–28. <https://doi.org/10.1016/j.actpsy.2017.12.010>
21. Gall.D.M et al. (2003). *Education Research an introduction seventh edition*. USA: Pearson Education. Inc.
22. Garcia, R. B., Mammarella, I. C., Tripodi, D., & Cornoldi, C. (2014). Visuospatial working memory for locations, colors, and binding in typically developing children and children with dyslexia and non-verbal learning disability. *British Journal of Developmental Psychology*, 32(1), 17–33. <https://doi.org/10.1111/bjdp.12019>
23. Hallahand & Kauffman. 1988. *Exceptional Children*. New Jersey: Prentice Hall, Inc.
24. Irdamurni., Kasiyati., Zulmiyetri, Taufan, J. (2018). The Effect of Mingle Model to Improve reading Skills for Students With Dyslexia in primary school, *Journal of ICSAR*, 2(2), 167 – 170. <https://doi.org/10.17977/um005v2i22018p167>
25. Kerlinger, F. N. (2014). *Foundations of behavioral research*. Yogyakarta: Gadjah Mada University Press.
26. Kjeldsen, A.-C., Educ, L., Saarento-Zaprudin, S. K., & Niemi, P. O. (2019). Kindergarten training in phonological awareness: Fluency and comprehension gains are greatest for readers at risk in grades 1 through 9. *Journal of Learning Disabilities*, 52, 366–382. <https://doi.org/10.1177/0022219419847154>
27. Kovelman, I., Norton, E.S., Christodoulou, J.A., Gaab, N., Lieberman, D.A., Triantafyllou, C., Wolf, M., Whitfield-Gabrieli, S., Gabrieli, J.D., (2012). Brain basis of phonological awareness for spoken language in children and its disruption in dyslexia. *Cereb. Cortex* 22, 754–764. <https://doi.org/10.1093/cercor/bhr094>
28. Landerl, K., Ramus, F., Moll, K., Lyytinen, H., Leppanen, P. H. T., Lohvansuu, K., & Schulte-Korne, G. (2013). Predictors of developmental dyslexia in European orthographies with varying complexity. *Journal of Child Psychology and Psychiatry*, 54, 686–694. <https://doi.org/10.1111/jcpp.12029>
29. Lyytinen, H., Aro, M., Eklund, K., Erskine, J., Guttorm, T., Laakso, M.L., Leppänen, P.H., Lyytinen, P., Poikkeus, A.M., Torppa, M., (2004). The development of children at familial risk for dyslexia: birth to early school age. *Ann. Dyslexia*. 54, 184–220. <https://doi.org/10.1007/s11881-004-0010-3>
30. Lyytinen, H., Guttorm, T.K., Huttunen, T., Paavo, J.H., Leppänen, H.T., Vesterinen, M., (2005). Psychophysiology of developmental dyslexia: a review of findings including studies of children at risk for dyslexia. *J. Neurolinguistics*. 18, 167–195. <https://doi.org/10.1016/j.jneuroling.2004.11.001>
31. Lyytinen, H., Erskine, J., Tolvanen, A., Torppa, M., Poikkeus, A.M., Lyytinen, P., (2006). Trajectories of reading development: a follow-up from birth to school age of children with and without risk for dyslexia. *Merrill-Palmer, Q.* 52, 514–546. <https://doi.org/10.1353/mpq.2006.0031>
32. Mann, V., & Wimmer, H. (2002). Phoneme awareness and pathways into literacy: A comparison of German and American children. *Reading and Writing*, 15, 653–682. <https://doi.org/10.1023/A:1020984704781>
33. Maison, Darmaji, Astalini, Dwi Agus Kurniawan, Peni Sefiah Indrawati. (2019). Science Process Skills And Motivation. *Humanities & Social Science Reviews (HSSR)*, 7(5), 48–56. <https://doi.org/10.18510/hssr.2019.756>
34. Maison., Astalini., Kurniawan, D. A., Perdana, R., Anggraini, L. (2019). The Phenomenon of Physicology Senior High School Education: Relationship of Students' Attitudes towards Physics, Learning Style, Motivation. *Universal Journal of Educational Research*, 7(10), 2199–2207. <https://doi.org/10.13189/ujer.2019.071018>
35. Melby-Lervag, M., Lyster, S.-A. H. & Hulme, C. (2012). Phonological skills and their role in learning to read: A meta-analytic review. *Psychological Bulletin*, 138, 322–352. <https://doi.org/10.1037/a0026744>



36. Mihandoost, Z., Elías, H., Sharifah., & Mahmud, R. (2011). A comparison of the reading motivation and reading the attitude of students with dyslexia and students without dyslexia in the elementary schools in Ilam, Iran. *International Journal of Psychological Studies*, 3(1), 17-27. <https://doi.org/10.5539/ijps.v3n1p17>
37. Nelson, J. M., Lindstrom, W., & Foels, P. A. (2015). Test anxiety among college students with specific reading disability (dyslexia) nonverbal ability and working memory as predictors. *Journal of Learning Disabilities*, 48(4), 422–432. <https://doi.org/10.1177/0022219413507604>
38. Pfost, M. (2015). Children's phonological awareness as a predictor of reading and spelling: A systematic review of longitudinal research in German-speaking countries. *Zeitschrift für Entwicklungspsychologie und Pädagogische Psychologie*, 47, 123–138. <https://doi.org/10.1026/0049-8637/a000141>
39. Pfost, M., Blatter, K., Artelt, C., Stanat, P., & Scheneider, W. (2019). Effects of training phonological awareness on children's reading skills. *Journal of Applied Developmental Psychology*. 65, 1-12. <https://doi.org/10.1016/j.appdev.2019.101067>
40. Ryan, R. M., & Deci E. L. (2009). *Promoting self-determined school engagement: Motivation, learning, and well-being*. In K. R. Wentzel & A. Wigfield (Eds.), *Handbook of motivation in school* (pp. 171-196). New York: Routledge.
41. Schiefele, U., Schaffner, E., Möller, J., & Wingfield, A. (2012). Dimensions of reading motivation and their relation to reading behavior and competence. *Reading Research Quarterly*, 47, 427-463.
42. Schwarb, H., Nail, J., & Schumacher, E. H. (2016). Working memory training improves visual short-term memory capacity. *Psychological Research*, 80(1), 128–148. <https://doi.org/10.1007/s00426-015-0648-y>
43. Shaywitz, B.A., Shaywitz, S.E., Pugh, K.R., Mencl, W.E., Fulbright, R.K., Skudlarski, P. (2002). Disruption of posterior brain systems for reading in children with developmental dyslexia. *Biol. Psychiatry*. 52, 101–110. [https://doi.org/10.1016/S0006-3223\(02\)01365-3](https://doi.org/10.1016/S0006-3223(02)01365-3)
44. Sideridis, G.D., Morgan, P.L., Botsas, G., Padeliadu, S., & Fuchs, D. (2006). Identification of students with learning difficulties based on motivation, metacognition, and psychopathology: A ROC analysis. *Journal of Learning Disabilities*, 39, 215-229. <https://doi.org/10.1177/00222194060390030301>
45. Skibbe, L., Behnke, M., dan Justice, L. M. (2004). Parental Scaffolding of Children's Phonological Awareness Skills. *Communication Disorder Quarterly*, 25, 189. <https://doi.org/10.1177/15257401040250040401>
46. Snowling, M.J., Hulme, C. (2011). Evidence-based interventions for reading and language difficulties: creating a virtuous circle. *Br. J. Psychol.* 81, 1–23. <https://doi.org/10.1111/j.2044-8279.2010.02014.x>
47. Stanovich, K.E. (1991). Discrepancy definitions of reading ability: Has intelligence led us astray? *Reading Research Quarterly*, 26, 7-29. <https://doi.org/10.2307/747729>
48. Stubss, S. (2002). *Inclusive Education Where There Are Few Resources*. The Atlas Alliance Global Support to Disabled People.
49. Suggate, S. (2016). A meta-analysis of the long-term effects of phonemic awareness, phonics, fluency, and reading comprehension interventions. *Journal of Learning Disabilities*, 49, 77–96. <https://doi.org/10.1177/0022219414528540>
50. Torgesen, J., Wagner, R., Rashotte, C. (1994). Longitudinal studies of phonological processing and reading. *J. Learn. Disabil.* 27, 276–286. <https://doi.org/10.1177/002221949402700503>
51. Torppa, M., Lyytinen, P., Erskine, J., Eklund, K., Lyytinen, H., (2010). Language development, literacy skills, and predictive connections to reading in Finnish children with and without familial risk for dyslexia. *J. Learn. Difficulties*. 43, 308–321. <https://doi.org/10.1177/0022219410369096>
52. United Nations Educational, Scientific, and Cultural Organization (UNESCO). 2001. *Understanding and Responding to Children's Needs in Inclusive Classrooms*. Diunduh dari; <http://www.unesco.org/education/educprog/sne>
53. Verhagen, J., & Leseman, P. (2016). How do verbal short-term memory and working memory relate to the acquisition of vocabulary and grammar? A comparison between first and second language learners. *Journal of Experimental Child Psychology*, 141, 65–82. <https://doi.org/10.1016/j.jecp.2015.06.015>
54. Wade, S, E. 2000. *Inclusive Education: A Casebook and Readings for Prospective and Practicing Teachers*. London: Lawrence Erlbaum Associates, Publishers. <https://doi.org/10.4324/9781410602480>
55. Wolf, K. M., Schroeders, U., & Kriegbaum, K. (2016). Meta-analysis Zur Wirksamkeit einer Forderung der phonologischen Bewusstheit in der Deutschen Sprache [Promoting phonological awareness in German: A meta-analysis]. *Zeitschrift für Pädagogische Psychologie*, 30, 9–33. <https://doi.org/10.1024/1010-0652/a000165>
56. Ziegler, J. C., & Goswami, U. (2005). Reading acquisition, developmental dyslexia, and skilled reading across languages: A psycholinguistic grain size theory. *Psychological Bulletin*, 131, 3–29. <https://doi.org/10.1037/0033-2909.131.1.3>
57. Ziegler, J.C., Bertrand, D., Tóth, D., Csépe, V., Reis, A., Fáisca, L., Saine, N., Lyytinen, H., Vaessen, A., Blomert, L., (2010). The orthographic depth and its impact on universal predictors of reading: a cross-language investigation. *Psychol. Sci.* 21, 551–559. <https://doi.org/10.1177/0956797610363406>
58. Zhao, J., Yang, Y., Song, Y. W. & Bi, H. Y. (2015). Verbal short-term memory deficits in Chinese children with dyslexia may not be a problem with the activation of phonological representations. *Dyslexia*, 21(4), 304–322. <https://doi.org/10.1002/dys.1516>